

G-002/M-88-254APPROVING CONSERVATION IMPROVEMENT PROGRAM, REQUIRING
ADDITIONAL FILINGS, AND REQUIRING ADDITIONAL PROJECTS

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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Cynthia A. Kitlinski	Commissioner
Norma McKanna	Commissioner
Robert J. O'Keefe	Commissioner
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In the Matter of the Implementation of an
Energy Conservation Improvement Program
for Northern States Power Company Gas
Utility

ISSUE DATE: October 3, 1988

DOCKET NO. G-002/M-88-254

ORDER APPROVING CONSERVATION
IMPROVEMENT PROGRAM, REQUIRING
ADDITIONAL FILINGS, AND REQUIRING
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PROCEDURAL HISTORY

On May 2, 1988 Northern States Power Company Gas Utility (NSP or the Company) made its 1988 Conservation Improvement Program (CIP) filing under Minn. Stat. 216B.241 (1986) and Minn. Rules, part 7840.0200 et seq. On May 26, 1988 the Commission issued its Order Accepting Northern States Power Company Gas Utility's 1988 Annual CIP Filing and Requiring Additional Information. On June 6, 1988 the Company made a supplementary filing meeting the requirements of that Order.

The Department of Public Service (the Department or the DPS) examined the filing and submitted detailed comments on June 10 and July 14, 1988. The Department recommended the approval of all proposed projects and the expansion of two of them. The Department also suggested several modifications to the Company's proposal and recommended that the Commission require additional explanatory filings.

The matter came before the Commission on September 29, 1988. Having reviewed the entire record herein and having considered the comments of all parties, the Commission makes the following findings and conclusions.

FINDINGS AND CONCLUSIONS

SUMMARY OF COMPANY'S PROPOSED PROGRAM

The Company's proposed program consists of eleven projects, which are described below.

PROJECTS TO BE CONDUCTED IN COOPERATION WITH THE CITY OF ST. PAUL

The Company proposed to continue seven projects it had conducted during the last CIP year. This year the Company proposed to delegate most of the responsibility for planning and implementing these projects to the City of St. Paul, which in turn agreed to cover the projects' administrative expenses. The total proposed budget for all seven projects was \$500,000, which included the City's \$44,410 in-kind contribution for administrative expenses. The seven projects are described below.

Technical and Information Referral Services -- This project provides back-up and support services for the other St. Paul CIP projects. Two community organizations, the Energy Resource Center and the Neighborhood Energy Consortium, provide technical assistance to customers with specific questions and arrange referrals for customers with specific needs. The purpose of the project is to coordinate the services of the St. Paul CIP projects with one another and with services offered by other energy programs or agencies. The Company proposed a budget of \$37,940.

Single Family Energy Audit Project -- This project is administered by the Neighborhood Energy Consortium and offers home energy audits for a \$10 fee to residential customers living in buildings of four or fewer residential units. The auditor visits the customer's home, examines the structure and heating system, determines the customer's energy use patterns, and provides an analysis of the household's conservation potential. This analysis addresses all conservation measures the household could undertake, e.g., major weatherization, caulking and weatherstripping, thermostat control, and includes recommendations on which measures would be most practical for that particular household.

The Company expects the Consortium to conduct approximately 1,800 audits during the CIP year and has budgeted \$145,000. NSP estimates that 62% of project participants will be low to moderate income customers and that 26% will be renters. Annual heating cost savings are expected to average 14% per participant.

Low-Income House Doctor Project -- This project will be limited to low income customers and will be administered by the Energy Resource Center and the Neighborhood Energy Consortium. Participants will receive furnace services and House Doctor services free of charge. Furnace services will include a safety check, cleaning, and tune-up. House Doctor services will include the installation of weatherstripping, caulking, water flow restricters, pipe insulation, rim joist insulation, and similar services.

The Company anticipates 134 participants, proposes a budget of \$62,650, and projects heating expense savings of 10% per participating household.

Furnace Repair Deferred Loans Project -- This project will be limited to low income participants and will be administered by the Energy Resource Center. The project is intended to serve as a lender of last resort for Low Income House Doctor participants whose furnaces are found to require repair or replacement to meet minimum safety standards.

The Company anticipates 20 participants, has budgeted \$30,000, and projects average annual heating expense savings of 10%.

Single Family Loans Project -- This project will be administered by the Energy Resource Center and will offer low interest loans for major conservation improvements to single family homeowners. The Energy Resource Center will act as a loan broker, arranging loans through the Energy Loan Program of the Minnesota Housing Finance Agency.

The Company expects to arrange 350 loans and has budgeted \$74,000. Heating expense savings are expected to average 25% per borrower.

Weatherization/Rehabilitation Project -- This project will be administered by the Neighborhood Housing Services, Inc. and will provide free conservation materials on a matching funds basis to low income homeowners. The maximum value of conservation materials provided will be \$1,000 per household.

The Company expects participation by 32 homeowners, with average heating expense savings of 20%. The proposed budget is \$32,000.

Multifamily Conservation Services Project -- This project will be administered by the Energy Resource Center and will provide technical assistance to non-profit organizations and owners of multifamily rental property. The technical assistance consists of low cost energy audits and the provision of a list of "guaranteed" contractors, whose reliability and work quality the Center certifies. The project will also provide low interest loans to help landlords bring their property into compliance with the City's energy efficiency standards for rental housing.

The Company anticipates providing 80 audits and 150 loans of \$4,000 each, for a total proposed budget of \$86,500. Heating cost savings are expected to average 20% for loan participants and 10% for audit participants.

RAMSEY ACTION PROGRAMS HOUSE DOCTOR AND FURNACE REPLACEMENT DEFERRED LOAN PROJECT

This project is administered by a non-profit community organization, Ramsey Action Programs, and delivers free furnace and House Doctor services to low income customers in St. Paul and the St. Paul suburbs. The furnace services consist of a safety inspection, cleaning, and tune-up, with repair or replacement of furnaces which do not meet minimum safety standards. Furnace replacement is accomplished through a deferred loan program. The House Doctor services follow an energy audit and focus on air infiltration reduction measures, such as weatherstripping, caulking, and rim joist insulation.

The Company anticipates 200 participants, with approximately 42 participants requiring furnace replacement. The proposed budget is \$202,400, and average heating cost savings are estimated between 8.3% and 13.5%.

OUTSTATE RESIDENTIAL PROJECT

This project will be administered by the Clay-Wilkin Opportunity Council and will provide conservation education and free furnace services to low income customers in the Moorhead area. The furnace services will consist of a safety inspection, cleaning, and tune-up, with repair or replacement of furnaces which do not meet minimum safety standards.

The Company anticipates 62 participants, of whom 11 are expected to require new furnaces. The Company proposes a budget of \$24,801 and estimates heating cost savings between 7% and 10% per participant.

COMMERCIAL AND INDUSTRIAL AUDIT PROJECT

In this project the Company will offer free energy audits to commercial and industrial customers in the East Grand Forks area. The audit will be identical to the one offered by the NSP Electric Utility and will be conducted by a state-certified energy auditor.

The Company anticipates 80 participants and has budgeted \$10,000. Annual heating cost savings are expected to average 6% to 10% per participant.

RESIDENTIAL AUDIT PROJECT

This project provides the federally mandated Residential Conservation Service audit to customers in St. Paul suburbs. The auditor visits the customer's home, examines the structure, determines the customer's energy use patterns, and provides an analysis of the household's conservation potential. This analysis addresses all conservation measures the household could undertake, e.g., major weatherization, caulking and weatherstripping, thermostat control, and includes recommendations on which measures would be most practical for that particular household. There is a \$10 fee for the

audit.

The project is administered by NSP. The Company anticipates 250 participants and has budgeted \$12,500. Estimated average annual heating cost savings range from 2% to 15%.

COMMISSION ACTION ON PROPOSED PROGRAM

The Program's General Adequacy

The Commission finds that the Company's program, taken as a whole and as modified below, fulfills the requirements of Minn. Stat. 216B.241 (1986). The program evinces a serious effort to address the conservation needs of the Company's customers in a comprehensive manner. It fulfills the statutory requirement that the Company make a significant investment in and expenditure for conservation improvements.

The program is geographically balanced, providing services to customers throughout the Company's service area. It covers both residential and commercial customers, which meets a longstanding Commission concern that companies not limit their conservation efforts to the residential customer class.

It provides an adequate range of services, including energy audits, furnace tune-ups and cleanings, and major weatherization services. It will deliver services of immediate practical benefit to large numbers of people.

One of the program's particular strengths is its emphasis on integrating its projects with one another and with other conservation programs in the community. In this way even narrowly focused projects can help deliver comprehensive energy services to CIP participants. Another strength is the continuity between last year's program and this year's. This ensures experienced service providers and provides an opportunity to build on past strengths and correct past weaknesses.

The Commission does see a need to expand the commercial and industrial audit project to another community and to offer furnace services to low income customers in another non-metropolitan area. The Commission also has serious concerns about the budgeting and accounting assumptions underlying portions of the Company's St. Paul proposals. Nevertheless, the substance of the program is sound and merits approval.

CONSIDERATION FOR NEEDS OF RENTERS AND LOW INCOME PEOPLE

The program fulfills the statutory requirement of showing special consideration for the needs of renters and low income people. Five of the eleven projects limit participation to low income people. Data submitted by the Company suggests that the other projects will also attract and serve low income and rental households. Approximately 62% of the Single Family Energy Audit Project participants are expected to be moderate to low income customers, for example, and 26% are

expected to be renters. Similarly, all housing weatherized by the Multifamily Conservation Services Project will be rental housing.

COST EFFECTIVENESS

The statute requires that, to the extent possible, the conservation improvements funded by the Company be cost effective. The statute speaks of cost effectiveness in terms of the cost of conservation improvements not exceeding the cost of producing or purchasing the amount of energy saved. Nevertheless, the statute requires the Commission to ensure that utilities with annual revenues exceeding \$50,000,000 make significant investments in and expenditures for conservation improvements, even if the level of cost effectiveness discussed above cannot be attained.

Cost effectiveness analysis for demand-side programs is an evolving area of utility regulation. The Commission, the Department of Public Service, the CIP utilities, and other parties have been engaged in studies and discussions on the issue since the CIP program began. It would be premature at this point to attempt a definitive analysis of the cost effectiveness of this year's program.

The Commission is convinced, however, that the program is cost effective under existing standards. No party challenged the cost effectiveness of the program taken as a whole. Furthermore, the Commission agrees with parties who have pointed out in the past that CIP projects produce many benefits which are not factored into traditional cost effectiveness analyses. These include more comfortable living and working environments, ecological benefits, infusion into the local economy of dollars which would otherwise have been spent on energy, potential for long term price stability resulting from limited need for new supplies, and data on usage patterns and conservation potential derived from conservation projects.

Considering both traditional cost effectiveness measures and the considerations set forth above, the Commission concludes that the Company's program complies with appropriate and prevailing cost effectiveness standards.

MODIFICATIONS TO PROPOSED PROGRAM

Budget Increase for Outstate Residential Project -- The Company proposed a \$24,801 budget for this project, as opposed to the \$46,840 budgeted last year. The project administrator, the Clay-Wilkin Opportunity Council, reported that, with adequate funding, it could provide three times as many audits as the Company proposed to fund. The Commission finds no justification for this proposed decrease in funding and will require the Company to increase the project's budget to \$50,000.

New Non-Metropolitan Residential Project Required -- While the Commission applauds the Company's far-reaching conservation efforts in St. Paul and the surrounding suburbs, the fact remains that 25% of the Company's residential customers live outside the Twin Cities metropolitan area. The only conservation service the Company offers most of these customers is the federally mandated Residential Conservation Service audit. That service is not targeted at low income people, a customer group whose needs must be given special consideration under the CIP statute.

Furthermore, participation rates in the Outstate Residential Project in Moorhead have been high, and the project clearly provides valuable services to participants. The Commission will therefore require that the Company offer a project on the same model in another non-metropolitan community during the 1988-89 CIP year.

The Commission will initially budget \$25,000 for this project, but that amount can be increased if the Company finds that more is required.

New Commercial and Industrial Audit Project Required -- As the Department noted in its comments, the Company's CIP efforts in the commercial and industrial areas do not appear proportionate to the 45% share of Minnesota sales revenues these customers represent. The Company's commercial and industrial CIP projects are a \$10,000 audit project in East Grand Forks and a St. Paul project targeted at owners of multifamily rental housing and non-profit organizations. Very few of the Company's commercial and industrial customers would qualify for either project.

The Commission realizes that many NSP Gas Utility customers are also served by the NSP Electric Utility and are eligible to receive energy audits from the latter company. Nevertheless, the Commission believes it is important for the Company to offer its commercial and industrial conservation services as widely as possible. Since Moorhead is a community within the Company's service area which is not served by the NSP Electric Utility, the Commission will require that the Company offer a project there on the model of the Commercial and Industrial Audit Project already approved.

The Commission will initially budget \$10,000 for this project, but the Company should not hesitate to request a budget increase if necessary.

New Commercial/Industrial Project to be Developed -- NSP recently completed a Commission-ordered commercial and industrial end-use study intended to assist the Company in developing conservation programs for these customer classes. The data from that study, together with an examination of the CIP experience of other gas utilities, should enable the Company to develop commercial projects in addition to the ones currently in operation. The Commission will require the Company to develop at least one new commercial/industrial project for inclusion in its May 1989 annual CIP filing and will authorize a \$5,000 1988-89 CIP budget item for this planning project.

Energy Resource Center Funding -- With the exception of the Furnace Repair Deferred Loans Project, none of the budgets for the projects to be administered by the Energy Resource Center have been presented in enough detail to allow the Commission to approve funding for the entire CIP year. The Commission has expressed concern in the past that project budgets not be presented as if CIP funding were one funding source among many making up an organization's overall funding structure. The Commission believes it has a statutory responsibility to ensure that CIP funds are used to deliver specific conservation services which would not be delivered in their absence.

For this reason the Commission was deeply concerned to learn that, in addition to the \$74,000 in CIP funds the Center seeks to support the Single Family Loans Project, it expects to receive an additional \$61,250 in origination fees from the lender. The total budget would thus appear to exceed the cost of the project. While the excess would no doubt support worthy conservation-related activities, it

is not the purpose of the CIP program to subsidize the general operations of conservation organizations. Apparently, the same situation prevails in the Multifamily Conservation Services Project, where the Center proposes to arrange weatherization loans for rental property owners. The Commission cannot approve the funding proposed for the Center's projects on the basis of the information currently available.

At the same time, the Commission realizes that the Center enjoys the confidence of NSP, the City of St. Paul, and the community it serves, and that it has reliably delivered high quality conservation services in past CIP years. To prevent disruption of services, the Commission will authorize the Furnace Repair Deferred Loans Project, as proposed, and will authorize a CIP budget at 1987-88 CIP year spending levels for the first quarter of the 1988-89 CIP year. Meanwhile, the Commission will require the Center to supply detailed budget information, as specified by Commission staff, and to meet with staff from the Commission, the Department, and the Company to clarify exactly what activities are proposed to be funded with money supplied by ratepayers. The Commission requests full cooperation by all parties to ensure that a more complete funding proposal can be presented to the Commission as soon as possible.

Single Family Energy Audit Funding -- The Company requested funding at \$145,000 for 1,800 audits, resulting in a per-audit cost of \$80.55. Last year's program had a per-audit cost of \$73.28, and the Ramsey Action Programs provide an identical audit at a per-audit cost of \$72.00. The Company has not explained or justified this cost increase, and it will not be approved. The project will be authorized at \$132,500, assuming a per-audit cost of approximately \$73.61.

Low Income House Doctor Project -- On June 28, 1988 the Commission issued its Order Approving and Revising CIP Project, which rejected the Company's proposal to provide the services of the Low-Income House Doctor Project at a cost of \$520 per participant. In that Order the Commission explained it could not approve the proposed \$110 allowance for furnace services, in large part because both Minnegasco and Northern Minnesota Utilities provided similar services at less than half that cost. In its supplemental filing on June 6 the Company again proposed the \$520 figure, with \$110 of that sum designated for furnace costs.

The Commission remains convinced that adequate furnace services can be obtained for less than \$110 per participating household, as the experience of the other two utilities demonstrates. Furthermore, the Commission is charged with responsibility for ensuring that CIP projects are as cost effective as possible, and that CIP programs meet the conservation needs of low income customers and renters as effectively as possible. Given these responsibilities, it would be incongruous to approve this project at the \$520 per-participant cost. That cost level would seriously decrease the project's cost effectiveness and would substantially reduce the number of low income customers who would receive services.

The Commission will authorize the project at a per-participant cost of \$479 and will require the Company to work with the project administrators to reduce the furnace services component of the project's cost.

Costs in the Ramsey Action Programs' Furnace Replacement Deferred Loan Project -- As part of its House Doctor and Furnace Replacement Deferred Loan Project, Ramsey Action Programs (RAP)

proposes to replace unsafe furnaces at an average cost of \$2,000 per furnace. The Energy Resource Center proposes to operate an identical project at a cost of \$1,500 per furnace.

The Commission is unable to distinguish any principled basis for this cost differential and will therefore reduce the furnace replacement deferred loan portion of RAP's budget to reflect an assumed average replacement cost of \$1,500, for a total project budget of \$63,000.

The Commission will also require the Company to file detailed information regarding the operation of the furnace replacement project as administered by both organizations. If upon closer examination the cost disparity appears to be justified, the Commission will entertain a proposal for increased funding for the RAP project.

ISSUES NOT REQUIRING PROGRAM MODIFICATION

Cost Effectiveness Studies to Continue -- The Commission continues to encourage and require the Company to work with the Department and other interested parties in developing and refining analytical techniques for measuring the cost effectiveness of CIP projects and programs. The Company should continue to submit cost effectiveness analyses for all projects in future CIP filings.

Conservation and Planning Activities to be Integrated -- The Department noted, and the Commission agrees, that the Company needs to continue to integrate its conservation activities with its planning activities, particularly those related to future demand and supply. The Commission will therefore require a special filing detailing its efforts in this regard, including the Company's quantitative conservation goals, estimates of energy savings resulting from CIP expenditures to date, and the Company's projected CIP budget over the next five years.

Standard Evaluation Forms to be Filed -- On April 22, 1988 the Commission required the Company to develop a standardized reporting form for the periodic status reports required of organizations administering CIP projects. That form has not yet been developed. The Commission will require that it be filed within 30 days of the date of this Order.

ORDER

1. The Commission approves the following amounts for the Company's 1988-89 CIP program, as modified herein, pending the provision of detailed budget information by the Energy Resource Center. With the exception of the \$30,000 designated for the Furnace Repair Deferred Loans Project, all amounts budgeted for projects administered by the Energy Resource Center are for the first quarter of the 1988-89 CIP year only.

Energy Resource Center Projects	\$ 71,250	
Neighborhood Energy Consortium Projects	\$202,500	
Neighborhood Housing Services Project	\$ 35,000	
Ramsey Action Programs Project		\$181,400
Outstate Residential Project, Moorhead	\$ 50,000	
Outstate Residential Project, New Location	\$ 25,000	
Commercial/Industrial Project, East Grand Forks		\$ 10,000
Commercial/Industrial Project, Moorhead	\$ 10,000	
Development of new Commercial/Industrial Project		\$ 5,000
Residential Audit Project	\$ 12,500	
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TOTAL		\$602,650

2. The Company, the Energy Resource Center, and other interested parties shall work together with Commission staff to present as soon as possible a more detailed funding proposal for those CIP projects to be administered by the Energy Resource Center. The Company and the Energy Resource Center shall provide detailed budget and program information as requested by Commission staff.
3. The furnace replacement deferred loan portion of Ramsey Action Programs' CIP budget is set at \$63,000 to reflect an assumption that the average furnace replacement costs \$1,500.

4. Within 15 days of the date of this Order the Company shall file detailed information regarding the operation of the furnace replacement project as administered by both the Ramsey Action Programs and the Energy Resource Center. That information shall include, but shall not necessarily be limited to, a description of furnace procurement policies, bidding procedures, average furnace prices, and average furnace efficiency ratings, for each organization.
5. Within 60 days of the date of this Order the Company shall file a new project proposal meeting the requirements of Minn. Rules, part 7840.0500 for another outstate residential project, similar to the one proposed for the Moorhead area, with a budget of approximately \$25,000.
6. Within 60 days of the date of this Order the Company shall file a new project proposal meeting the requirements of Minn. Rules, part 7840.0500 for another commercial industrial audit project, similar to the one proposed for the East Grand Forks area. That project shall operate in the Moorhead area and shall have a budget of approximately \$10,000.
7. The Company shall develop at least one new project targeted at commercial and/or industrial customers for inclusion in its 1989-98 CIP program.
8. Within 30 days of the date of this Order the Company shall file the standardized reporting form required in the Order of April 22, 1988.
9. The Company shall work with the Department to continue integrating its conservation activities with its planning activities, particularly those related to future demand and supply, and shall, within 90 days of the date of this Order, file its quantitative conservation goals, estimates of energy savings resulting from CIP expenditures to date, and the Company's projected CIP budget over the next five years.
10. To the maximum extent practicable the Company shall ensure that all CIP participants have free choice of the devices, methods, materials, sellers, installers, and contractors used in making conservation improvements to their property.
11. The Company shall continue to work with the Department in the development of cost effectiveness analyses for gas utilities. Both parties shall continue to submit cost effectiveness analyses and accompanying explanatory notes for proposed CIP projects.
12. Parties shall have 15 days from the date of filing to comment on any filing required hereunder.
13. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Mary Ellen Hennen
Executive Secretary

(S E A L)